INDEX

JOURNAL OF ENGINEERING PHYSICS

Volumes 26-27, 1974

JOURNAL OF ENGINEERING PHYSICS

Volumes 26-27, 1974

(A translation of Inzhenerno-Fizicheskii Zhurnal)

A

Abdrakhmanov, M. A. - 322
Abramenko, T. N. - 1231
Afanas'eva, I. N. - 749
Agaev, N. A. - 1400
Aizen, A. M. - 453
Akesnov, V. V. - 1426
Akhmadeev, M. Kh. - 439
Aksel'rud, G. A. - 48, 624, 1492
Aksyutov, L. N. - 913
Aleksandrov, A. A. - 1235
Alekseev, D. P. - 1437
Alifanov, O. M. - 90, 246, 471
Amel'yanchik, A. V. - 489
Anan'ev, I. N. - 328
Andreev, E. F. - 939
Andreevskii, A. A. - 110
Antanovich, A. A. - 197
Antonishin, N. V. - 353
Antonova, G. S. - 172
Aref'ev, K. M. - 1351
Artamanov, S. D. - 842
Astrakhan, I. M. - 384

B

Babenko, Yu. I. - 362, 509
Babenkova, L. I. - 659
Babich, B. N. - 516
Babitskii, A. F. - 215
Babushkin, N. M. - 704
Baikov, V. I. - 686, 861, 1384
Banchila, S. N. - 839
Barelko, V. V. - 672
Barkov, Yu. I. - 1203
Bartman, A. B. -1495
Baskakov, A. P. - 60, 798, 1464
Baskakova, A. A. - 738
Batalov, V. S. - 835
Belashova, G. I. - 1512
Belousova, L. E. - 1035
Belov, I. A. - 689
Benzar', V. K. - 595
Beregovoi, A. N. - 1357
Berezovskii, É. I. - 1556
Berg, B. V. - 60
Berkovskii, B. M. - 80, 1203
Berman, Yu. A. - 1388
Beshkov, V. N. - 1266
Bibik, A. P. - 30
Birger, B. N. - 1301
Bitsyutko, I. Ya. - 37
Bobolev, V. K. - 1003
Bobrova, G. I. - 333
Bobryakov, G. I. - 37
Bogdanova, I. A. - 33
Boiko, A. N. - 867, 1175
Bokovikova, A. Kh. - 161
Bologa, M. K. - 956
Bolonov, N. I. - 630
Bol'shakov, Yu. V. - 741, 888
Borishanskii, V. M. - 110, 760
Borman, V. D. - 1219
Borodulya, V. A. - 1440
Borovkov, I. S. - 265, 432
Botin, A. N. - 804
Boyadjiev, C. - 1266
Bozhko, D. F. - 1345
Brailovskii, Ya. L. - 741, 888
Bratukhin, Yu. K. - 86
Bratuta, É. G. - 1438
Brichkin, L. A. - 347
Briskman, B. A. - 1333
Bronshtein, V. I. - 1260
Brounshtein, B. I. - 699
Bruk, N. D. - 780
Bubnov, V. A. - 254
Buglaev, V. T. - 749
Buglaeva, L. D. - 627
Buglakov, V. I. - 1345
Bukhtilova, M. A. - 441
Bulanov, N. V. - 136
Buleev, N. I. - 1447
Bulgakova, L. V. - 974
Burdukov, A. P. - 1307
Bushmarin, O. N. - 871
Byrkin, A. P. - 265

C

Chechko, G. A. - 212
Chekalova, L. A. - 552, 667
Chepurnoi, M. N. - 1010
Cherepennikov, I. A. - 64
Chernyak, V. G. - 309
Chernyavskii, I. Ya. - 1426
Chernyshov, A. D. - 1022
Chigarev, V. N. - 1276
Chirkov, I. M. - 505
Chudnovskii, A. F. - 982, 1216, 1506
Chuiko, E. E. - 1573
Chumak, I. G. - 389
Chupakhin, M. S. - 1502

D

Danilin, A. P. - 754
Danilov, O. L. - 5
Darinskii, Yu. V. - 347
Davydenko, V. G. - 313
Demchuk, S. A. - 1569
Deryagin, B. V. - 1380
Detkov, S. P. - 1357
Diligenskii, N. V. - 659
Dil'man, V. V. - 1180
Dinzburg, G. B. - 1300
Dobrychenko, V. M. - 1251
Dolgushev, V. A. - 1550
Dozin, M. E. - 1437
Drachev, N. M. - 100
Druzhkin, N. M. - 785
Dubovik, A. V. - 1003
Dubovik, V. I. - 412
Dubynin, A. I. - 48
Dul'nev, G. N. - 276, 606, 790, 829, 883
Durnov, V. K. - 704
Dvin, Yu. P. - 1298
Dymant, L. N. - 867, 1175

E

Efimov, A. B. - 664
Efremenko, G. N. - 613
Éidel'man, A. E. - 630
Eleinikova, L. S. - 1290
Eremeev, M. A. - 606, 829
Eroshenko, V. M. - 867, 1175
Ershov, A. I. - 387
Esina, I. V. - 675

Esmedlyaev, S. A. - 902
Evplanov, A. I. - 1467
Evseeva, M. P. - 780

F

Fainitskii, M. Z. - 780
Fastova, K. N. - 1310
Fateev, G. A. - 37
Fedik, I. I. - 1573
Fedosov, V. A. - 513
Fedotkin, I. M. - 453, 804, 1010, 1276, 1380
Fertman, V. E. - 1203
Filin, N. V. - 888
Filippov, L. P. - 839
Fishbein, G. A . - 699
Flegentov, I. V. - 182
Fokin, B. S. - 110
Frolov, V. V. - 1281
Fromzel', V. N. - 110

G

Gadiev, S. M. - 384
Galaktionov, S. G. - 769, 1495
Galushkin, S. S. - 590
Gamayunov, N. I. - 155
Garifullin, F. A. - 182
Gavin, L. B. - 292
Gavrilov, S. D. - 1396
Gavrilov, Yu. A. - 883
Gel'fand, B. E. - 877
Geller, M. A. - 353
Geller, V. Z. - 733, 842
Genkin, V. S. - 1180
Gershuni, A. N. - 1487
Gertsyk, Si. I. - 1423
Globa, V. Z. - 804
Gol'dman, N. L. - 1270
Golovinskii, G. P. - 1460
Golubkov, V. S. - 148, 745
Z. R. Gorbis - 384, 956
Gorelik, A. G. - 511
Gorelik, G. E. - 232
Gortyshev, Yu. F. - 131
Grechannyi, O. A. - 727
Gregorich, Teodor - 1583
Grekov, S. P. - 1539
Greshilov, E. M. - 178
Grinevich, K. P. - 1310
Grishin, V. K. - 25, 951
Grushetskii, S. V. - 694
Gubin, S. A. - 877
Gubinskii, V. I. - 1186
Gumnitskii, Ya. M. - 48
Gurenkova, T. V. - 1516
Gurskii, L. I. - 1287
Gusakov, A. A. - 1422
Gusenkov, G. N. - 505

I

Illarionov, Yu. T. - 760
Il'yasov, S. G. - 1521
Isaev, A. I. - 998
Isaev, R. G. - 500
Ispiryan, R. A. - 155
Ivakhnik, V. P. - 219
Ivanov, V. S. - 1010
Ivanov, V. T. - 1431
Ivanyuta, Yu. F. - 552, 667
Ivashchenko, N. I. - 760

K

Kacharskaya, L. V. - 318
Kagan, V. K. - 902
Kalinin, R. I. - 993
Kalinina, L. S. - 447
Kalugin, V. N. - 212
Kalyusski, A. E. - 1539
Kamenetskii, V. R. - 586
Kamenskii, V. G. - 128
Kan, D. L. - 1013
Kanaev, A. A. - 910
Kapinos, V. M. - 282
Kaplan, Sh. G. - 1310
Karpenko, V. S. - 817
Kartashov, N. N. - 385
Karyakin, Yu. E. - 206
Kashinskii, O. N. - 202
Kazakova, L. Ya. - 1447
Kazakova, S. M. - 1331
Kazanskii, V. M. - 823
Keilin, V. E. - 1543
Kertselli, I. Yu. - 1317
Khabenskii, V. B. - 993
Khairutdinov, K. A. - 1433
Khalatov, A. A. - 131
Kharitonov, E. P. - 313
Khomchenkov, B. M. - 1351
Khoze, A. N. - 1307
Kirichenko, Yu. A. - 791
Kirov, V. S. - 152
Kleinman, I. A. - 1502
Klenovskaya, B. - 1474
Koba, A. L. - 1294
Kocherov, V. L. - 193
Kogan, I. N. - 385
Kogarko, S. M. - 877
Kokhanskii, A. I. - 389
Koleshko, V. M. - 1287
Kolesov, V. S. - 1573
Kolykhalov, G. A. - 1422
Komarov, V. S. - 689
Komarovskaya, N. V. - 372
Kondrat'ev, E. A. - 60
Kononenko, V. P. - 18
Konstantinov, E. N. - 1321
Konstantinov, S. M. - 1430
Kopeikis, M. G. - 1249
Kopp, I. Z. - 910
Korobko, E. V. - 568
Korobko, O. V. - 367
Korolenko, Yu. A. - 675
Korsunov, Yu. A. - 627
Kostornov, A. G. - 1487
Kostyrko, K. - 1474
Kotel'nikov, V. V. - 1426
Koval, Yu. D. - 678
Kovalev, I. A. - 1543
Kovalevskii, A. A. - 1287
Koval'kov, V. P. - 340
Kozhelupenko, Yu. D. - 152
Kozhin, V. P. - 37
Krasavtsev, A. A. - 689
Krasnich, S. G. - 599
Krasnikov, V. V. - 908, 1521
Krasovitskii, B. A. - 384
Krasyuk, B. A. - 1299
Kravtsov, I. A. - 618
Krichevskii, E. S. - 590
Krivosheev, Yu. I. - 464
Krivoshein, B. L. - 1403
Krzhizhanovskii, R. E. - 33
Kuleshov, V. A. - 1422
Kuptsova, V. S. - 1199
Kuts, P. S. - 447, 533, 908, 1550
Kuz'min, V. A. - 1307
Kuznechikov, V. A. - 1321
Kuznetskii, R. S. - 386
Kvetnyi, M. A. - 993

L

Landau, A. M. - 636, 1470
Larini, Michel - 641
Lazarev, A. I. - 429
Lebedev, D. P. - 712, 939
Legkii, V. M. - 678
Le Kue Ki, - 712
Lelekhov, S. A. - 1543
Leonov, V. V. - 486
Lesyuis, A. R. - 1351
Levchenko, V. N. - 357
Lipsman, V. S. - 1010
Lishanskii, B. A. - 1207
Litevchuk, D. P. - 945
Litovskii, E. Ya. - 1225
Litvinenko, I. V. - 30
Logunov, A. V. - 516
Loshchinin, V. M. - 1447
Lubyshev, F. V. - 1431

Lukach, Yu. E. - 193
Lun'kin, Yu. P. - 292
Luste, O. Ya. - 969
Lutsik, P. P. - 945
Lutsik, Yu. P. - 945
Lyakhov, V. K. - 74
Lyashev, K. F. - 1380
Lykov, A. V. - 11, 537, 558
Lykov, M. V. - 717
Lysenko, O. E. - 429
Lysikov, Yu. I. - 289
Lyubin, L. Ya. - 43, 1453

M

Maiorov, V. A. - 961
Makarov, A. M. - 486, 1372
Makarov, I. I. - 489
Maksimenko, Yu. F. - 653
Maksyntenko, S. N. - 1251
Malenko, G. L. - 43
Mal'kov, V. A. - 226
Malov, Yu. I. - 1017
Malovichko, V. S. - 1430
Mal'tseva, V. A. - 1299
Mamedov, A. M. - 1244, 1417
Mantulenko, S. I. - 393
Marchenkov, E. I. - 762
Markov, I. I. - 1427
Maron, V. I. - 68, 857
Martinson, L. K. - 1017, 1372
Matsepuro, A. . - 1443, 1569
Matsevityi, Yu. M. - 897
Maurin, L. N. - 86
Mchedlidze, G. V. - 158
Medvedev, B. I. - 1423
Meerovich, I. G. - 1317
Mekher, Ya. M. - 1299
Merkulov, A. P. - 1295
Merzhanov, A. G. - 343
Michkovskii, B. A. - 1464
Mikhailenko, A. V. - 969
Mikryukova, T. I. - 270
Minashin, V. E. - 357
Minin, O. V. - 775
Minukhin, L. A. - 1429
Mironov, Yu. V. - 1425
Mirzadzhanadze, A. Kh. - 1249
Mochalov, V. A. - 403
Mogilevskii, B. M. - 982, 1216, 1506
Moroz, A. L. - 1487
Morozkin, V. I. - 100
Morozov, M. G. - 1364
Muchnik, G. F. - 1317
Mukhamedzyanov, G. Kh. - 1516
Mukhametzyanov, I. Kh. - 1516
Mukhin, V. A. - 202
Murashko, M. G. - 1482

N

Naberezhnov, A. M. - 998
Nagaev, R. F. - 1388
Nekaryukin, I. V. - 1287
Nesterenko, V. B. - 270, 393
Nikitin, E. D. - 136
Nikolaev, B. I. - 1219
Nikolaev, G. P. - 1
Novakovskii, V. N. - 1403
Novichenok, L. N. - 1331, 1569
Novikov, P. A. - 43, 1453
Nuretdinov, Z. - 1400
Nyashin, Yu. I. - 328

O

Olodovskii, P. P. - 1192, 1482
Oreper, G. M. - 1492
Orlov, L. P. - 1304
Orlyanskii, V. V. - 548

P

Pakhaluev, V. M. - 1368
Palkin, I. I. - 1447
Panasenko, L. N. - 1260
Pankratov, N. A. - 148, 745
Papkovich, V. N. - 1495
Paramonov, I. A. - 733
Parnas, A. L. - 353
Pashaev, A. A. - 1400
Pashchenko, G. F. - 618
Pavlov, K. B. - 166, 1017
Pavlyukevich, N. V. - 232
Peredrii, V. G. - 842
Perel'man, T. L. - 232, 367, 409, 769, 1013, 1260, 1495, 1556
Pereselkov, A. R. - 1438
Petit, Jean-Pierre - 641
Petrikevich, B. B. - 927
Petrov, L. K. - 595
Petrovichev, V. I. - 988
Petrushin, N. V. - 516
Pikus, I. F. - 18, 447, 1584
Pilipenko, N. V. - 276
Pilipko, N. K. - 548
Piralishvili, Sh. A. - 1295
Pis'man, I. I. - 1400
Platonov, B. D. - 1299
Pleshchankov, G. A. - 270
Plotnikov, M. A. - 197
Podolyaka, A. N. - 1296
Podval'nyi, A. M. - 720
Pogorelov, V. I. - 1436
Pokusaev, B. G. - 1307
Polyakov, A. F. - 1422
Ponomarev, O. A. - 289
Popov, A. I. - 577
Popov, V. D. - 1430
Popov, V. M. - 1339
Porodnov, B. T. - 309
Potapov, I. N. - 100
Povarnitsyn, M. S. - 422
Povkh, I. L. - 630, 1251
Pozvonkov, F. M. - 741, 888
Pribytkova, K. V. - 343
Prokhorova, E. A. - 489
Prokof'ev, V. E. - 104
Prokopets, S. I. - 380, 1424
Pron'ko, V. G. - 482
Prostov, P. V. - 1447
Pushkov, V. V. - 956
Pustyl'nikov, L. M. - 347
Putin, B. A. - 582

Q

Quantaliani, N. E. - 459

R

Rabinovich, A. Z. - 1502
Rabinovich, G. D. - 51, 219, 302, 441
Radchenko, I. V. - 30
Rafales-Lamarks, É. É. - 1207
Rafalowicz, J. - 1326
Raiskii, Yu. D. - 1578
Raitsis, M. B. - 1294
Ralko, A. V. - 618
Razina, N. S. - 1425
Redchits, I. S. - 453
Red'ko, Yu. F. - 969
Remizov, O. V. - 1432
Reusova, L. A. - 717
Reznikov, B. S. - 1287
Rikenglaz, L. É. - 1527
Rimkevich, I. M. - 595
Rivkind, V. Ya. - 699
Rogotskii, Ya. T. - 624
Roitberg, M. B. - 1502
Romanov, V. N. - 1216
Romanovskii, M. R. - 1372
Romanovskii, V. R. - 1372
Romashko, E. A. - 409, 1556
Rozen, A. M. - 1429
Rozina, K. A. - 769
Rudakov, R. F. - 988
Rumyantsev, V. N. - 357
Rusin, S. P. - 139
Rzhevskaya, V. B. - 1240
Ryzhkov, A. F. - 798
Rzyanin, B. F. - 1345

S

Salganik, R. L. - 1534

Sal'nikov, I. E. - 888
Salov, V. S. - 5
Sankovich, V. M. - 265
Saraev, Yu. V. - 871
Savchenkov, G. A. - 384
Savel'ev, A. D. - 25
Savel'ev, G. Ya. - 1434
Savina, V. P. - 1333
Semena, M. G. - 1487
Semerchan, A. A. - 197
Senin, V. V. - 974
Sen'ko, Yu. P. - 847
Sergeev, G. T. - 558
Sergeev, S. P. - 1180
Shadek, E. G. - 1270
Shalaev, S. V. - 95
Shapiro, I. S. - 313
Sharapov, V. A. - 1296
Sharov, V. G. - 206
Shashkov, A. G. - 762, 1231
Shchelkunov, V. N. - 791
Shcherbanina, G. B. - 1436
Shcherbakov, G. I. - 95
Shcherbakov, L. A. - 1453
Shcherbinin, V. I. - 161
Shchukin, V. K. - 131
Sheinkman, A. G. - 1368
Shekhter, Yu. L. - 1422
Shekriladze, I. G. - 468
Shimanovich, V. D. - 313
Shinkevich, T. T. - 599
Shirokova, N. L. - 178
Shirolapova, T. B. - 489
Shklyar, F. R. - 161
Shnaider, V. E. - 1010
Shpakovskii, R. P. - 811
Shtessel', É. A. - 343, 672, 861
Shul'man, Z. P. - 527, 568, 1249, 1302, 1384, 1443, 1569
Shuster, A. R. - 699
Shvedova, G. N. - 486
Sidorova, N. P. - 33
Simkhovich, S. L. - 1372
Simonov, V. P. - 922
Simoshenkova, L. G. - 745
Sinitsyn, A. K. - 80
Sirotkin, G. L. - 817
Skorokhodov, A. N. - 328
Skripov, V. P. - 136
Skurin, L. I. - 398
Slitenko, A. F. - 282
Slobodkin, L. S. - 144, 599, 918
Slyusarev, V. V. - 733
Smirnov, G. F. - 384, 1294
Smol'skii, B. M. - 391, 1302
Sobakin, V. N. - 988
Sobin, V. M. - 387
Soboleva, E. N. - 1270
Sokolov, E. I. - 296
Sokolov, V. N. - 1506
Sokolovskaya, A. V. - 464
Sokovishin, Yu. A. - 238
Sotnikov-Yuzhik, Yu. M. - 144, 918
Sovershennyi, V. D. - 1435
Spanovskii, V. M. - 1175
Sporyagin, É. A. - 193
Stasevich, L. A. - 1299
Steklyannikova, E. K. - 398
Stepchuk, I. D. - 804
Stotland, D. M. - 155
Strikitsa, B. I. - 388
Strokin, V. N. - 1564
Stupin, A. B. - 1251
Suetin, P. E. - 309
Sukhobokov, A. D. - 95
Svershchek, V. I. - 1453
Svirnovskaya, I. L. - 1331, 1569
Syromyatnikov, N. I. - 1467

T

Tamarin, A. I. - 933
Tanaeva, S. A. - 336
Teplitskii, Yu. S. - 933
Tetel'baum, S. D. - 152
Timokhin, É. M. - 627
Tishin, A. P. - 627
Tkachenko, O. A. - 804
Tkachenko, S. I. - 804
Tochigin, A. A. - 754
Tokalov, Yu. K. - 1
Tokarskii, B. N. - 389
Tolchinskaya, R. E. - 1310
Trakhtengerts, M. S. - 1235
Trokhan, A. M. - 572
Troyan, V. I. - 1219
Tsabek, L. K. - 260, 477, 1041, 1410
Tsaplin, M. I. - 416
Tseitin, V. M. - 769
Tsemekhman, L. Sh. - 1351
Tsirel'man, N. M. - 495, 892, 1030
Tumpurova, V. F. - 982
Tunkel', L. E. - 1578
Turkin, E. A. - 95
Tverkovkin, B. E. - 270, 393
Tyntarev, E. M. - 993

U

Uskov, V. N. - 296
Usmanov, A. G. - 1516
Uspenskii, A. B. - 1270
Uspenskii, I. N. - 1225
Uspenskii, V. A. - 1296

V

Vachagin, K. D. - 998
Vaisblat, M. B. - 1429
Vanicheva, N. A. - 978
Vargaftik, N. B. - 978
Vasanova, L. K. - 1467
Vasilenko, I. P. - 336
Vasil'ev, L. I. - 529, 961
Vasserman, A. A. - 582
Veregin, N. N. - 1302
Vermishev, M. K. - 403
Vernidub, I. I. - 627
Vershinin, I. D. - 265
Vertogradskii, V. A. - 1212
Vishnyakov, V. I. - 166
Vlasov, Yu. N. - 572
Volkov, D. I. - 760
Voloshko, A. A. - 518
Volovel'skii, I. L. - 282
Volynets, A. Z. - 613
Vorob'ev, V. A. - 1432
Vorob'ev, V. N. - 664
Vorontsov, E. G. - 187
Vurdenko, O. Kh. - 1296
Vu Zuy Quang - 520
Vyaz'menskaya, L. M. - 1255

Y

Yabko, I. A. - 1425
Yakhno, O. M. - 187
Yakushev, A. P. - 393
Yanbulatov, D. M. - 495, 892, 1030
Yargin, V. S. - 1512
Yas'ko, O. I. - 694, 1260
Yushkov, P. P. - 375, 1240
Yusibova, A. D. - 1400

Z

Zagoruiko, V. A. - 464
Zagrebin, L. N. - 738
Zaichik, L. I. - 1317
Zal'tsgendler, E. A. - 861, 1384
Zaporozhan, G. V. - 842
Zarichnyak, Yu. P. - 829
Zaripov, V. K. - 1487
Zborovskii, I. D. - 1225
Zelepuga, A. S. - 817
Zelikson, D. L. - 572
Zelin'skii, M. - 48
Zen'kovskii, A. G. - 1423
Zerichnyak, Yu. P. - 606
Zhelznyak, A. S. - 636, 1470
Zhorzholiani, G. I. - 468
Zhuravskii, G. I. - 333
Zikert, G. - 618
Zimin, A. G. - 852
Zinnatullin, N. Kh. - 182
Zino, I. E. - 238
Zinov'ev, V. E. - 738
Zolotukhina, A. F. - 1231
Zuikova, E. E. - 1299
Zverev, A. F. - 516

JOURNAL OF ENGINEERING PHYSICS

Volumes 26-27, 1974

(A translation of Inzhenerno-Fizicheskii Zhurnal)

Volume 26, Number 1 January, 1974

	Engl.	Russ.
Boiling Crisis on Surfaces with Porous Coatings — G. P. Nikolaev and Yu. K. Tokalov	1	5
Condenstion of a Binary Mixture of Immiscible Fluid Vapors — V. S. Salov and O. L. Danilov	5	10
On Systems of Differential Equations for Heat and Mass Transfer in Capillary Porous Bodies — A. V. Lykov	11	18
Thermophysical Properties of a Multilayer Capacitor Dielectric under Vacuum — I. F. Pikus and V. P. Kononenko	18	26
Mass Exchange in the High-Vacuum System of Chamber—Test Object—Pump Assembly — V. K. Grishin and A. D. Savel'ev	25	35
Thermal Conductivity of Heavy-Oxygen Water H_2O^{18} — A. P. Bibik, I. V. Litvinenko, and I. V. Radchenko	30	42
Experimental Investigation of the Electrical Resistivity of Some Molten Bismuth—Tin Binary Alloys and of the Thermal Conductivity of Bismuth, Tin, and a Eutectic Bismuth—Tin Alloy — R. E. Krzhizhanovskii, N. P. Sidorova, and I. A. Bogdanova	33	46
Study of Heat Transfer between Thermoreactive Mixtures and Heated Surfaces — I. Ya. Bitsyutko, G. I. Bobryakov, V. P. Kozhin and G. A. Fateev	37	51
Pressure Distribution between Parallel Plates Arising from the Molecular Viscous Flow of Vapor during the Sublimation of Ice — P. A. Novikov, G. L. Malenko, and L. Ya. Lyubin	43	58
Mass Transfer in the Chemical Interaction of a Solid with a Moving Liquid, Complicated by the Evolution of a Gas Phase — G. A. Aksel'rud, A. I. Dubynin, Ya. M. Gumnitskii, and M. Zelin'skii	48	64
Effect of Concentration Asymmetry on the Effectiveness of Thermal-Diffusion Columns — G. D. Rabinovich	51	68
Fluidized-Bed Muffle Heating for Process Ovens — B. V. Berg, E. A. Kondrat'ev, and A. P. Baskakov	60	79
Use of Molecular Characteristics to Calculate Viscosity of Mineral Solutions — I. A. Cherepennikov	64	85
Model of Dispersion Taking into Account the Difference in Viscosities of the Media — V. I. Maron	68	90
Hydraulic Resistance and Heat and Mass Exchange during Turbulent Flow over Surfaces with Slight Roughness — V. K. Lyakhov	74	97
Thermoconvective Waves in a Layer with Free Boundaries — B. M. Berkovskii and A. K. Sinitsyn	80	104
On Hydrodynamic Phenomena Accompanying Melting in a Particular Case — Yu. K. Bratukhin and L. N. Maurin	86	112
Regularization Schemes for Approximate Solution of Nonlinear Reverse Problem of Heat Conduction — O. M. Alifanov	90	116
Experimental Study of Temperature Fields and Heat Fluxes in the Chamber of an Electric Arc Heater — A. D. Sukhobokov, E. A. Turkin, S. V. Shalaev, and G. I. Shcherbakov	95	122

	Engl.	Russ.
Dimensions of the Crater Formed by the Penetration of Fast Particles into Solid Barriers — N. M. Drachev, V. I. Morozkin, and I. N. Potapov	100	129
Electrical Models for the Solution of Inverse Nonsteady Heat-Conduction Problems — V. E. Prokof'ev	104	134
REVIEWS		
Analysis of the Relationships for the Calculation of Heat Transfer Coefficients for the Flow in Vapor-Generating Channels of a Liquid Heated to the Saturation Temperature -- A. A. Andreevskii, V. M. Borishanskii, V. N. Fromzel', and B. S. Fokin	110	142
CHRONICLES		
Conference on Heat Treatment of Concrete Structures in Electromagnetic Field — V. G. Kamenskii	128	165

Volume 26, Number 2 February, 1974

Mass Transfer from Surface of Initial Section of Wind Tunnel into a Partially Swirled Stream — V. K. Shchukin, A. A. Khalatov, and Yu. F. Gortyshev	131	197
Thermal Conductivity of Metastable Fluids — N. V. Bulanov, E. D. Nikitin, and V. P. Skripov	136	204
Analysis of Radiative Heat Transfer in Nonisothermal Cavities — S. P. Rusin	139	208
Investigation of the Primary Thermal Radiation Characteristics of Materials by the Method of Measuring Hemispherical Capacities — L. S. Slobodkin and Yu. M. Sotnikov-Yuzhik	144	215
Optimal Sizes of Suspension Tubes in Nitrogen-Free Helium Cryostats — V. S. Golubkov and N. A. Pankratov	148	220
Determination of Heat-Transfer Coefficient for Gas Mixtures Containing Helium and Hydrogen — V. S. Kirov, Yu. D. Kozhelupenko, and S. D. Tetel'baum	152	226
Measurement of the Kossovich Number for Thawing Frozen Soil — N. I. Gamayunov, R. A. Ispiryan, and D. M. Stotland	155	229
Heat Transfer from Electrically-Heated Thin Vertical Wires under Free Convection — G. V. Mchedlidze	158	233
Interaction of Radiation and Convection in Combined Heat Transfer in a Short Channel — V. I. Shcherbinin, A. Kh. Bokovikova, and F. R. Shklyar	161	238
Peristaltic Flow of a Non-Newtonian Liquid with a Power-Type Rheological Law in a Slot Channel — V. I. Vishnyakov and K. B. Pavlov	166	245
Motion and Thermodynamic Instability of a Liquid in a Variable Capillary — G. S. Antonova	172	252
Effect of Polymer Additives on Wall Turbulence — E. M. Greshilov and N. L. Shirokova	178	260
Thin-Layer Flow of Nonlinear Elastoviscous Fluid in a Field of Centrifugal Forces — N. Kh. Zinnatullin, I. V. Flegentov, and F. A. Garifullin	182	266
Characteristics of Gravitational Flow of Nonuniformly Distributed Thin Liquid Layers — E. G. Vorontsov and O. M. Yakhno	187	272
Behavior of Polymer Melts in Rotary Instruments of the Plane—Plane and Cone—Plane Type — V. L. Kocherov, Yu. E. Lukach, and É. A. Sporyagin	193	280
Discharge of a Gaseous Medium under High Pressure through a Nozzle with a Small Opening — A. A. Semerchan, M. A. Plotnikov, and A. A. Antanovich	197	286
Experimental Study of Turbulent Friction in a Flat Diffusor by the Electrochemical Method — O. N. Kashinskii and V. A. Mukhin	202	293
A Finite-Difference Method of Calculating a Turbulent Boundary Layer of Incompressible Liquid — Yu. E. Karyakin and V. G. Sharov	206	298
Viscous Instability of an Incompressible Plane Jet — V. N. Kalugin and G. A. Chechko	212	305
Experimental Study of Internal Cavitating Flows — A. F. Babitskii	215	309
Effects of Heat-Transfer Conditions on the Performance of a Liquid Thermal-Diffusion Column — G. D. Rabinovich and V. P. Ivakhnik	219	314

	Engl.	Russ.
Thermal Resistance of Contacts Coated with Low Conductivity Materials — V. A. Mal'kov	226	324
Possible Influence of the Self Diffusion of the Atoms on Mass Displacement in a Solid Undergoing a Surface Reaction — G. E. Gorelik, N. V. Pavlyukevich, and T. L. Perel'man	232	332
Steady Heat-Conduction Problem for a Double Cylinder — I. E. Zino and Yu. A. Sokovishin	238	339
Determination of Boundary Thermal Regime from the Solution of an Inverse Heat-Conduction Problem — O. M. Alifanov	246	349
On the Correlation Function of Velocity Distribution of Molecules — V. A. Bubnov	254	359
Isothermal Kinetics of Sorption in Porous Media — L. K. Tsabek	260	367

Volume 26, Number 3 March, 1974

Experimental and Calculated Study of Laminar Flow of a Compressible Gas in Short Channels with Cooled Walls – I. S. Borovkov, A. P. Byrkin, I. D. Vershinin, and V. M. Sankovich	265	389
Heat Exchange during Laminar Flow of Chemically Reactive NO_2 Gas in a Flat Tube with Boundary Conditions of the Second Kind – V. B. Nesterenko, B. E. Tverkovkin, G. A. Pleshchankov, and T. I. Mikryukova	270	396
Thermal State of Dynamic Calorimeters – G. N. Dul'nev and N. V. Pilipenko	276	403
Effect of a Temperature Gradient on the Heat Transfer during Laminar Natural Convection along a Vertical Wall – V. M. Kapinos, A. F. Slitenko, and I. L. Volovel'skii	282	411
Viscosity Characteristic of a Concentrated Ionomer Solution near the Ion Cluster Formation – Yu. I. Lysikov and O. A. Ponomarev	289	420
Nonequilibrium-Ionized Viscous Impact Layer near the Stagnation Point – L. B Gavin and Yu. P. Lun'kin	292	424
Wave Structure of Counterflowing Supersonic Underexpanded Jets – E. I. Sokolov and V. N. Uskov	296	429
Determination of the Soret Coefficient in a Thermodiffusion Column by the Transient Method. I. — G. D. Rabinovich	302	436
Application of the Variation Method to the Problem of Thermomolecular Pressure Difference in a Cylindrical Channel – V. G. Chernyak, B. T Porodnov, and P. E. Suetin	309	446
Investigation of Kinetics of Anode Spots in Plasma Cutting of Metals – V. G. Davydenko, E. P. Kharitonov, I. S. Shapiro, and V. D. Shimanovich	313	451
Model of the Turbulent Diffusion of Aerosols – L. V. Kacharskaya	318	457
Solution of Two Conjugate Equations – M. A. Abdrakhmanov	322	462
Variational Method of Calculating a Nonstationary Temperature Field – I. N. Anan'ev, Yu. I. Nyashin, and A. N. Skorokhodov	328	470
Temperature Distribution in a Porous Matrix–Liquid System – G. I. Bobrova and G. I. Zhuravskii	333	477
Determination of Capillary Conductance of Unsaturated Capillary-Porous Materials – S. A. Tanaeva and I. P. Vasilenko	336	481
On Calculating the Motion of the Interphase Boundary in Bodies with Simple Shapes and Variable Properties – V. P. Koval'kov	340	486
Numerical Investigation of Induction Stage of Development of Natural Convection – É. A. Shtessel', K. V. Pribytkova, and A. G. Merzhanov	343	490
Analysis of the Hyperbolic Process of Heat Conduction for a Hollow Cylinder Heated by a Moving Source – L. A. Brichkin, Yu. V. Darinskii, and L. M. Pustyl'nikov	347	495
Hyperbolic Equation of Heat Conduction for Dispersed Systems – N. V. Antonishin, M. A. Geller, and A. L. Parnas	353	503
Approximate Analytical Temperature Calculation for a Fuel Rod with Defects in the Contact Layer – V. E. Minashin, V. N. Rumyantsev, and V. N Levchenko	357	509

	Engl.	Russ.
Heat Transfer in an Unevenly Cooled Rod – Yu. I. Babenko	362	516
Temperature Distribution in the Human Body under General Deep Hyperthermia – O. V. Korobko and T. L. Perel'man	367	523
Radiative Heat Transport and Optical Density in Loosely Packed Fibers – N. V. Komarovskaya	372	529
More Accurate Difference Schemes for Solving the Heat-Conduction Equation with Boundary Conditions of the Third Kind – P. P. Yushkov	375	533
Solution of a Boundary-Value Problem for a Nonlinear Differential Equation by the Method of Successive Approximations – S. I. Prokopets	380	539
ABSTRACTS		
Effects of Vibration on Soil Freezing around a Borehole – I. M. Astrakhan, S. M. Gadiev, and B. A. Krasovitskii	384	544
Heat Transfer for a Liquid Boiling in a Bed of Granular Material – Z. R. Gorbis, G. F. Smirnov, and G. A. Savchenkov	384	544
Continuous Plastic-Viscosity Measurement on a Liquid from the Damped Reciprocating Motion of a Plate – I. N. Kogan and N. N. Kartashov	385	545
Temperature Distribution in a Flat Conductor with Temperature-Dependent Resistivity Carrying an Alternating Current – R. S. Kuznetskii	386	546
Upward Flow of a Liquid Film in Response to a Spiral Gas Flow – V. M. Sobin and A. I. Ershov	387	547
Transition Functions and the Solution of Direct and Inverse Problems in Thermoelasticity for a Plate – B. I. Strikitsa	388	548
Calculation of Pipeline Stress and Temperature by Initial-Condition Relaxation and Time Stepping – B. N. Tokarskii	389	549
Derivation of Heat- and Mass-Transfer Coefficients for Heat Exchangers from Frequency Characteristics – I. G. Chumak and A. I. Kokhanskii	389	550
BOOK REVIEWS		
B. N. Yudaev – Textbook on "Heat Transmission" – Reviewed by B. M. Smol'skii	391	552

Volume 26, Number 4 April, 1974

	Engl.	Russ.
A Method of Computing Heat-Transfer Coefficient in the Flow of a Chemically Reacting N_2O_4 Gas — S. I. Mantulenko, V. B. Nesterenko, B. E. Tverkovkin, and A. P. Yakushev	393	581
Approximate Analysis of a Multicomponent Reacting Wake — L. I. Skurin and E. K. Steklyannikova	398	588
Convective Motion in a Closed Vertical Cavity with Permeable Lateral Walls — V. A. Mochalov and M. K. Vermishev	403	594
Scale of the Convection Cell Structure in a Horizontal Layer of Liquid with Unsymmetrical Boundary Conditions for Heat Transfer — T. L. Perel'man and E. A. Romashko	409	602
Criterial Equations for Calculating the Friction and Heat Exchange at a Vertical Porous Surface with Combined Convection — V. I. Dubovik	412	606
Fluid Flow between a Rotating Disk and a Fixed Wall — M. I. Tsaplin	416	611
Computation of Steady-State Temperature Field in Turbulent Gas Flow in Two-Dimensional Channel with Heat Releasing Walls — M. S. Povarnitsyn	422	618
Circulation Motion of a Viscous Incompressible Stream in an Extruder Channel — A. I. Lazarev and O. E. Lysenko	429	626
Operation of the Simplest Gas Ejector from the Point of View of the Thermodynamics of Irreversible Processes — I. S. Borovkov	432	630
Effect of the Temperature on the Diffusion Rate of Certain Surface-Active Substances Soluble in Water — M. Kh. Akhmadeev	439	640
Determination of the Soret Coefficient in a Thermodiffusion Column by the Transient Method. II. — G. D. Rabinovich and M. A. Bukhtilova	441	643

	Engl.	Russ.
Coefficient of Internal Mass Transfer in Electrical-Grade Cellulosics under Vacuum and under Atmospheric Pressure — P. S. Kuts, I. F. Pikus, and L. S. Kalinina	447	651
On Improving the Convergence of Series Used in Solving the Heat-Conduction Equation — A. M. Aizen, I. S. Redchits, and I. M. Fedotkin	453	659
Mass Transfer in Heterogeneous Chemical Reactors under Variable Hydrodynamic Conditions — N. E. Quantaliani	459	667
Application of the Similarity Method to a Study of Hygrothermal Equilibrium in Capillary-Porous Colloidal Materials — V. A. Zagoruiko, Yu. I. Krivosheev, and A. V. Sokolovskaya	464	673
Conditions of Boundary-Layer Separation during Condensation on a Cylinder in a Transverse Stream — I. G. Shekriladze and G. I. Zhorzholiani	468	678
Solution of an Inverse Problem of Heat Conduction by Iteration Methods — O. M. Alifanov	471	682
Sorption Dynamics in Porous Media — L. K. Tsabek	477	690
Effects of Heat-Transfer Rate and Coolant Flow Parameters on Heating and Cooling Rates — V. G. Pron'ko	482	696
Spherically Symmetric Stefan Problem with a Boundary Condition of the Third Kind — A. M. Makarov, V. V. Leonov, and G. N. Shvedova	486	701
Computer Calculation of the Temperature Distribution for a Steel Casting Solidifying in a Mold — A. V. Amel'yanchik, I. I. Makarov, T. B. Shirolapova, and E. A. Prokhorova	489	705
Variational Solution of a Heat-Conduction Problem for a Region with Moving Boundaries — D. M. Yanbulatov and N. M. Tsirel'man	495	714
Thermomechanical Behavior of a Multicomponent Continuous Medium Interacting with an Electromagnetic Field — R. G. Isaev	500	720
Solution of a Nonlinear Problem in Heat Conductivity Investigations — G. N. Gusenkov and I. M. Chirkov	505	727
Determination of Variable Coefficient of Heat Transfer for a Thin Semiinfinite Rod — Yu. I. Babenko	509	732
Radius of a Tube with Heat Sources (Sinks) — A. G. Gorelik	511	735
Determining the Thermal Diffusivity of Pyroelectric Materials — V. A. Fedosov	513	738
Thermophysical Properties of Dispersion-Hardened Nickel — B. N. Babich, A. F. Zverev, A. V. Logunov, and N. V. Petrushin	516	742
Buildup Rate of Vapor Bubbles at a Heater Surface — A. A. Voloshko	518	744
Conjugate Problem of Natural Convection in a Vertical Channel with Heat Release from a High-Frequency Electric Current — Vu Zuy Quang	520	747
OBITUARIES		
Lev Abramovich Vulis	525	754
CHRONICLES		
Conferences of Readers of the Journal of Engineering Physics in Baku and Erevan (1973) — Z. P. Shul'man	527	756
First International Conference on Heat Pipes — L. L. Vasil'ev	529	757

Volume 26, Number 5 May, 1974

In the Vanguard of Soviet Science	531	773
The Role of Desiccation Technology in Raising the Effectiveness of Production — P. S. Kuts	533	775
Some Problems of the Theory of Mass and Heat Transport — A. V. Lykov	537	781
Electrification of a Heterogeneous Flow Interacting with a Metal — N. K. Pilipko and V. V. Orlyanskii	548	794
Velocity Profile of the Turbulent Flow of Weak Polymer Solutions in a Tube — Yu. F. Ivanyuta and L. A. Chekalova	552	799

	Engl.	Russ.
Distribution of the Heat and Mass Transfer Parameters with a Reaction Front within a Laminar Boundary Layer — A. V. Lykov and G. T. Sergeev	558	807
Study of Electrorheological Effect during Flow of Dielectric Suspensions in a Horizontal Coaxially Cylindrical Capacitor — Z. P. Shul'man and E. V. Korobko	568	820
Dynamic Calibration of Contact Thermometers in a Liquid Stream — Yu. N. Vlasov, D. L. Zelikson, and A. M. Trokhan	572	825
Effect of Nonuniform Sensitivity Distribution along a Wire Thermoanemometer Probe on Turbulence Measurement — A. I. Popov	577	832
Equation for Calculating the Thermal Conductivity of a Gas in the Critical Region — A. A. Vasserman and B. A. Putin	582	839
Calculation of the Coefficient of Viscosity of Moderately Compressed Gases — V. R. Kamenetskii	586	844
Method of Optimum Compacting of Control Material in Moisture Sensors — E. S. Krichevskii and S. S. Galushkin	590	849
Microwave Method for Studying the Porous Structure of Water-Saturated Dielectric Materials — L. K. Petrov, I. M. Rimkevich, and V. K. Benzar'	595	856
Investigation of Temperature Fields in a Two-Layer System with a Pulsed Heat–Radiation Effect — L. S. Slobodkin, T. T. Shinkevich, and S. G. Krasnich	599	861
Heat Transfer in Granular Systems with a Random Structure — G. N. Dul'nev, M. A. Eremeev, and Yu. P. Zerichnyak	606	870
Connection between the Parameters of an Evaporating Material and the Gaseous Medium Surrounding It — G. N. Efremenko and A. Z. Volynets	613	879
Determination of the Dissipative Effects during Sinter Treatment of Ceramics — A. V. Ralko, I. A. Kravtsov, G. F. Pashchenko, and G. Zikert	618	886
General Method for Transformation of Heat- and Mass-Transfer Processes in a Bed — G. A. Aksel'rud and Ya. T. Rogotskii	624	894
Experimental Determination of the Conditions for the Granulation (Breakdown) of Aluminum Oxide Drops in a High-Temperature Gas Flow — L. D. Buglaeva, I. I. Vernidub, Yu. A. Korsunov, É. M. Timokhin, and A. P. Tishin	627	897
Formation and Development of Turbulence during Movement of a Disperse System in a Round Tube — I. L. Povkh, N. I. Bolonov, and A. E. Éidel'man	630	901
Mass Transfer in a Moving Drop when it Periodically Collides with a Hard Surface — A. M. Landau and A. S. Zhelznyak	636	908
Transport Phenomena in a Nonequilibrium, Partially Ionized Gas in a Magnetic Field — Jean-Pierre Petit and Michel Larini	641	914
Connection between Pulsation Spectrum of a Furnace Flame and the Air Excess — Yu. F. Maksimenko	653	930
An Approximate Method of Computing Heat Transfer in Gas-Electric Heaters — N. V. Diligenskii and L. I. Babenkova	659	938
A Mixed Boundary-Value Problem for the Laplace Equation — A. B. Efimov and V. N. Vorob'ev	664	944

Volume 26, Number 6 June, 1974

Investigation of the Influence of Polymer Admixtures on the Magnitude of the Local Drag Coefficient – Yu. F. Ivanyuta and L. A. Chekalova	667	965
Heat Transfer from a Horizontal Cylinder under Mixed Convection Conditions – V. V. Barelko and E. A. Shtessel	672	972
Structure of Free Convective Flow in a Closed Three-Dimensional Cavity – Yu. A. Korolenko and I. V. Esina	675	977
Heat Transfer to a Flat Plate in a Fully-Developed Turbulent Boundary Layer – V. M. Legkii and Yu. D. Koval	678	981
Two-Phase Flow and Heat Transfer in Boundary Layer of a Thin Body of Revolution – V. I. Baikov	686	991
Flow Near the Stagnation Point of an Obstacle Washed by a Two-Dimensional Subsonic Stream – I. A. Belov, V. S. Komarov, and A. A. Krasavtsev	689	995

	Engl.	Russ.
Experimental Investigation of Energy Characteristics and Heat Transfer of SHF Discharge – S. V. Grushetskii and O. I. Yas'ko	694	1001
Mass Transfer Accompanied by a Chemical Reaction Taking Place Rapidly Inside a Moving Spherical Drop – B. I. Brounshtein, V. Ya. Rivkind, G. A. Fishbein, and A. R. Shuster	699	1008
Effect of the Degree of Roughness of the Enclosing Walls and the Geometrical Simplex of the Layer on the Structure and Loss of Head in Stationary and Moving Granular Layers (Beds) – V. K. Durnov and N. M. Babushkin	704	1014
External Mass Exchange in the Process of Sublimation Drying in a Vacuum – D. P. Lebedev and Le Kue Ki	712	1024
Analysis of Heat Transfer in Spray Desiccators during the Production of Foamy Polymer Filler – L. A. Reusova and M. V. Lykov	717	1030
Calculated Effects of Various Factors on the Frost Resistance of Concrete – A. M. Podval'nyi	720	1034
Brownian Diffusion in Nonequilibrium Gas – O. A. Grechannyi	727	1043
Experimental Study Concerning the Contribution of the Radiative Component to the Effective Thermal Conductivity of Toluene – V. Z. Geller, I. A. Paramonov, and V. V. Slyusarev	733	1052
Measurement of Thermal Diffusivity of Hemispherical Samples (Bismuth) – A. A. Baskakova, V. E. Zinov'ev, and L. D. Zagrebin	738	1058
Temperature Variation along a Cylindrical Heat Bridge in Cryogenic Pipelines – Yu. V. Bol'shakov, Ya. L. Brailovskii, and F. M. Pozvonkov	741	1062
Thermal Links for Reducing the Heat Leakage to Cryostats – N. A. Pankratov, V. S. Golubkov, and L. G. Simoshenkova	745	1067
Effect of Velocity of a Condensing Vapor Stream on Distribution of Local Heat Exchange Characteristics along the Height of a Vertical Tube – V. T. Buglaev and I. N. Afanas'eva	749	1072
True Vapor and Gas Contents of Unheated Flows of Mixtures in Tubes – A. A. Tochigin and A. P. Danilin	754	1079
An Experimental Study of Heat Transfer in Water Condensation Inside Vertical Tubes – V. M. Borishanskii, D. I. Volkov, N. I. Ivashchenko, and Yu. T. Illarionov.	760	1086
Thermal Conductivity of Helium in the Range 400-1500°K as Determined by a Molybdenum Measurement Cell – E. I. Marchenkov and A. G. Shashkov	762	1089
Calculation of Near-Field Molecular Interactions in Polymers – S. G. Galaktionov, T. L. Perel'man, K. A. Rozina, and V. M. Tseitin	769	1098
On a Certain Class of Incorrectly Stated Problems in Analytical Theory of Thermal Conductivity and in the Theory of Indirect Measurements – O. V. Minin.	775	1105
A Method of Simulating the Crust Formation in the Ore Bath of Smelting Furnaces – M. Z. Fainitskii, N. D. Bruk, and M. P. Evseeva	780	1112
Rheological and Thermophysical Handbook Data for High-Viscosity Compounds (Mastics) – N. M. Druzhkin	785	1118
OBITUARY		
Aleksandr Savvich Predvoditelev	788	1121
BOOK REVIEWS AND BIBLIOGRAPHY		
R. E. Krzhizhanovskii and Z. Yu. Shtern – Thermophysical Properties of Nonmetallic Materials (Oxides). Reviewed by G. N. Dul'nev	790	1123

Volume 27, Number 1 July, 1974

Experimental Investigation of Heat Transfer in Axisymmetric Volumes for Boundary Conditions of the Second Kind – Yu. A. Kirichenko and V. N. Shchelkunov.	791	5
Equations of Motion of the Material in a Shaker – A. F. Ryzhkov and A. P. Baskakov	798	15

Heat Transfer in a Vertical Evaporation Circuit at Low Pressures and in Vacuo under Conditions of Vibrational Instability – S. I. Tkachenko, I. M. Fedotkin, I. D. Stepchuk, O. A. Tkachenko, A. N. Botin, and V. Z. Globa 804 23
Generalization of Experimental Data on Heat and Mass Transfer during the Evaporation and Sublimation of Different Substances in a Forced Stream – R. P. Shpakovskii. 811 32
Kinetics of the Process of Electrocontact Drying of Moist Materials – A. S. Zelepuga, G. L. Sirotkin, and V. S. Karpenko 817 40
The Rebinder Number as a Characteristic of the Thermodynamic and Transport Properties of Dispersed Materials – V. M. Kazanskii. 823 48
Thermal Conductivity of Consolidated Systems – G. N. Dul'nev, M. A. Eremeev, and Yu. P. Zarichnyak 829 55
The Measurement Procedure in the Dilatometer Method of Determining the Thermal Diffusivity of Materials – V. S. Batalov 835 63
Experimental Study of the Set of Thermal Properties of Certain Rare-Earth Metals at High Temperatures – S. N. Banchila and L. P. Filippov 839 68
Thermal Conductivity of Freon-12 – V. Z. Geller, S. D. Artamanov, G. V. Zaporozhan, and V. G. Peredrii 842 72
Heat Capacity of Aqueous Solutions of Sulfuric Acid at Low Temperatures – Yu. P. Sen'ko 847 78
Shock Radiation Recombination as a Diffusion Process – A. G. Zimin 852 85
Impurity Dispersion in the Turner Model for Flow in a Porous Channel – V. I. Maron . 857 92
Spatial Free Convection of Nonlinearly Viscous Fluids Around Axisymmetric Bodies – Z. P. Shul'man, V. I. Baikov, and E. A. Zal'tsgendler 861 97
Universal Mean Velocity Profile in the Jet Part of the Turbulent Boundary Layer – A. N. Boiko, L. N. Dymant, and V. M. Eroshenko 867 105
Parametric Method in the Theory of an Unsteady Boundary Layer – O. N. Bushmarin and Yu. V. Saraev 871 110
Various Forms of Drop Fractionation in Shock Waves and Their Special Characteristics – B. E. Gel'fand, S. A. Gubin, and S. M. Kogarko. 877 119
Thermal Conditions of Electronic Instruments of Cassette Construction with Forced Ventilation – Yu. A. Gavrilov and G. N. Dul'nev 883 127
Heat Transfer in Separable Connections of Cryogenic Systems – Yu. V. Bol'shakov, Ya. L. Brailovskii, F. M. Pozvonkov, I. E. Sal'nikov, and N. V. Filin 888 133
Application of a Variational Method for the Solution of Nonstationary Heat-Conduction Problems – N. M. Tsirel'man and D. M. Yanbulatov 892 138
Inverse Problem of Heat Conduction with Account of the Temperature Dependence of the Thermophysical Characteristics – Yu. M. Matsevityi 897 145
Solving Heat-Conduction Equation for a Two-Component Cylinder and Thermal Design of a dc Motor – V. K. Kagan and S. A. Esmedlyaev 902 151

BOOK REVIEWS
V. V. Krasnikov. Conductive Drying – Reviewed by P. S. Kuts 908 159
D. D. Kalafati and V. B. Kozlov. Thermodynamics of Liquid-Metal MHD Generators – Reviewed by A. A. Kanaev and I. Z. Kopp 910 161

Volume 27, Number 2 August, 1974

Normal Spectral Emissivity of Gold, Platinum, and Tungsten – L. N. Aksyutov. 913 197
Measurement of the Monochromatic Emissivity of Coatings at 100-400°C – L. S. Slobodkin and Yu. M. Sotnikov-Yuzhik 918 203
Characteristics of Thermal Radiation in Axisymmetric Cavities – V. P. Simonov ... 922 208
Convective Heat Transfer in Channels Having Various Cross Sections – B. B. Petrikevich 927 215

	Engl.	Russ.
Variational Formulation of the Hydrodynamics of a Concentrated Gas—Solid System at High Archimedes Numbers — A. I. Tamarin and Yu. S. Teplitskii	933	223
Heat and Mass Transfer and Duration of the Desublimation of Water Vapor in Vacuum — E. F. Andreev and D. P. Lebedev	939	231
Coefficients of Capillary Mass Transfer of Porous Solids Based on Curves of Pore Distribution — P. P. Lutsik, Yu. P. Lutsik, and D. P. Litevchuk	945	239
Mass Transfer in a Highly Rarefied Gas — V. K. Grishin	951	246
Heat Exchange of Gas-Disperse Systems in a Uniform Electric Field — V. V. Pushkov, Z. R. Gorbis, and M. K. Bologa	956	253
Hydrodynamic and Thermal Characteristics of an Equilibrium Two-Phase Porous-Cooling System — V. A. Maiorov and L. L. Vasil'ev	961	260
Heat Transfer in Conductive Microcalorimeters — Yu. F. Red'ko, A. V. Mikhailenko, and O. Ya. Luste	969	270
Compensating for Heat Flows Along Current Leads — V. V. Senin and L. V. Bulgakova	974	277
Thermal Conductivity of Some Deuterated Compounds in the Gaseous Phase — N. B. Vargaftik and N. A. Vanicheva	978	282
Thermal Conductivity and Structural Characteristics of CaF_2 Crystals Doped with NaF and YF_3 — B. M. Mogilevskii, V. F. Tumpurova, and A. F. Chudnovskii	982	287
Investigation of the Phonon Heat Conduction of Monocrystals by a Quantum Acoustic Method — V. I. Petrovichev, R. F. Rudakov, and V. N. Sobakin	988	296
Temperature Fields in a Pipe Wall in the Case of Radiative Heating and a Supercritical Working-Medium Pressure — V. B. Khabenskii, M. A. Kvetnyi, E. M. Tyntarev, and R. I. Kalinin	993	303
An Engineering Method for Calculating the Flow of Polymers in Channels of Noncircular Cross Section — A. I. Isaev, K. D. Vachagin, and A. M. Naberezhnov	998	310
Shock-Induced Spreading of a Film of a Non-Newtonian Liquid — A. V. Dubovik and V. K. Bobolev	1003	317
Hydrodynamics of Descending Turbulent Flow of Liquid Film and Gas — I. M. Fedotkin, V. S. Ivanov, V. S. Lipsman, M. N. Chepurnoi, and V. E. Shnaider	1010	326
Laminar Flow in a Narrow Cylindrical Tube — D. L. Kan and T. L. Perel'man	1013	330
Solution of Some Mixed Heat-Conduction Boundary-Value Problems — Yu. I. Malov, L. K. Martinson, and K. B. Pavlov	1017	335
Solution of a Plane, Axisymmetric and Three-Dimensional Single-Phase Stefan Problem — A. D. Chernyshov	1022	341
Variational Solution of Third Boundary-Value Problem of Heat Conduction — N. M. Tsirel'man and D. M. Yanbulatov	1030	351
Nonstationary Thermal Stresses in a Hollow Cylinder with Heat Flux Acting on the Inside Surface — L. E. Belousova	1035	358
Integration of Nonlinear Equations of Equilibrium Kinetics of Physical Sorption with Regard to Heat Release — L. K. Tsabek	1041	366
Aleksei Vasil'evich Lykov	1046	373

Volume 27, Number 3 September, 1974

Experimental Study of Boiling on Heating Surfaces during the Thermal Fluidization of a Bed of Particles – Z. R. Gorbis and M. I. Berman	1049	389
An Experimental Study of the Flow of a Liquid Film Along a Vertical Wall — V. E. Nakoryakov, B. G. Pokusaev, V. V. Khristoforov, and S. B. Alekseenko	1055	397
Properties of Transverse Distributions of Local Heat Exchange Coefficients in the Initial Section of Rectangular Channels with Mixed Flow in the Boundary Layer — V. M. Legkii	1059	402

	Engl.	Russ.
One Possible Model for the Transfer Process in the Near-Critical State of a Liquid — Sh. G. Kaplan and R. E. Tolchinskaya	1064	409
Asymptotic Stage of Growth of a Vapor Bubble — V. A. Knyazev	1069	416
Taking Account of Resonance Radiation in the Problem of Nonequilibrium Ionized Gas Flow Around Blunt Bodies — N. V. Leont'eva, Yu. P. Lun'kin, and A. A. Fursenko	1073	421
Calculation of the Interaction of Supersonic Counter Flows — V. B. Balakin and V. V. Bulanov	1079	430
Production and Investigation of Supersonic Jets of Rarefied Gas — L. L. Vasil'ev, Yu. A. Lapshin, and A. N. Piskunov	1085	438
Closed Evaporative Cooling of Rotating Electrical Machines — M. P. Kukherskii	1090	446
Internal Natural Convection for a Deflected Heat Source of Finite Size — V. N. Zaitsev, N. E. Cherepkova, and V. I. Shakhurdin	1097	457
Free Convection of Nonlinearly-Viscous Liquids Around Axisymmetric Solids, Allowing for the Temperature Dependence of the Consistency — Z. P. Shul'man, É. A. Zal'tsgendler, and V. I. Baikov	1099	460
A Theoretical and Experimental Study of Chromatothermography at High Concentrations — S. M. Yanovskii, I. A. Silaeva, and G. L. Kogan	1104	466
Thermal Diffusivity of Carbon Dioxide in the Near Critical Region — D. G. Amirkhanov, A. G. Usmanov, and P. A. Norden	1110	476
Structural Characteristics of Alkaline Earth Fluorides and Their Thermal Conductivity: SrF_2 with YF_3 and LuF_3 Impurities — B. M. Mogilevskii, V. F. Tumpurova, and A. F. Chudnovskii	1114	482
Effect of Repeated Cooling on the Thermophysical Properties of Constructional Glass Plastics in the Temperature Range 10-400°K — S. A. Tanaeva, L. S. Domorod, and L. V. Bulgakova	1117	486
The Effective Thermal Diffusivity of Packed Fluidized Beds — A. I. Tamarin and R. R. Khasanov	1121	491
Solution of Heat-Transfer Problems in a Layer — V. I. Gubinskii	1125	497
Theory of the Radiometer Effect — I. F. Mikhailov and L. V. Tanatarov	1130	504
An Approximate Method of Solving Stationary Heat Conduction Problems with Mixed Boundary Conditions of the Third Kind — Yu. Ya. Iossel', G. E. Klenov, and R. A. Pavlovskii	1133	507
Iterative Approximation Method for Solving Heat Conduction Equations — G. P. Kobranov	1138	513
ABSTRACTS OF PAPERS DEPOSITED AT VINITI		
Unsteady Convective Heat Transfer in Natural Cooling of Vertical Plates — I. V. Il'inskii, É. E. Prokhach, and V. P. Pershin	1146	524
Effect of Aerodynamic Characteristics of an Instrument on the Driving Force of Heat and Mass Transfer — Yu. I. Volovik	1147	525
Aerosol of Variable Mass in a Vortex Flow — V. A. Uspenskii, O. Kh. Vivdenko, V. N. Zaitsev, V. A. Sharapov, and M. F. Shitikov	1148	526
Study of the Possibility of Using Empirical Functions of the Coefficient of Resistance for the Calculation of Curvilinear Dust-Laden Flows — V. D. Lebedev, S. G. Ushakov, and V. E. Maslov	1149	527
Concentration of Suspended Particles of Variable Mass in a Turbulent Flow B. P. Kazakov, A. E. Krasnoshtein, and T. A. Samarina	1150	528
Model Equations of the Kinetics of Desorption — L. K. Tsabek	1151	529
On a Heat-Transfer Problem — M. P. Lenyuk	1152	530
Method of Calculating Thermodynamic Properties of n-Alkanes from Ultrasonic Measurements at Pressures up to 2000 atm — B. S. Kir'yakov, N. F. Otpushchennikov, and P. P. Panin	1153	531
The Zero Static-Pressure Level in Cyclone Chambers — A. N. Shtym and A. S. Latkin	1154	532
Determination of the First Root of the Characteristic Equations in the Analytical Theory of Thermal Conductivity — A. A. Shmakin	1155	533

	Engl.	Russ.
Solution of a Mixed Boundary-Value Problem for Thermal Conduction in a Cylindrical Region with an Inclusion – G. A. Zhil'kov	1156	534
Trends in Constant-Temperature Line Motion in Solids – M. M. Tsirel'man	1157	535
Regularization of the Thermal Conditions in the Center of a Bounded Body – N. M. Tsirel'man	1158	537
Heat Transfer in a System of Two Semi-Infinite Bodies Separated by an Interlayer – E. M. Makushok, A. N. Ravin, V. P. Sverdenko, and É. Sh. Sukhodrev	1159	538
PEOPLE OF SOVIET SCIENCE		
Samson Semenovich Kutateladze (On His 60th Birthday) – Editorial Board	1160	540
In Memory of Professor K. I. Strakhovich (1894-1968)	1163	543
OBITUARY		
Petr Kuz'mich Konakov – Editorial Board	1172	552
BOOK REVIEWS		
A. V. Borodulya. High-Temperature Processes in Electrothermal Fluidized Bed – Reviewed by V. K. Kashirskii	1173	553

Volume 27, Number 4 October, 1974

	Engl.	Russ.
A Turbulent Jet in a Concurrent Stream at a Permeable Surface – A. N. Boiko, L. N. Dymant, V. M. Eroshenko, and V. M. Spanovskii	1175	581
Distribution of Streams in Channels with Porous Walls – S. P. Sergeev, V. V. Dil'man, and V. S. Genkin	1180	588
General Problems of Heat Exchange in a Moving Layer – V. I. Gubinskii	1186	596
Change in the Density of the Dispersion Medium in a Solid-Adsorbed Water–Liquid System. Calculation of the Adsorption Characteristics of Dispersed Systems – P. P. Olodovskii	1192	604
Using Approximate Analytic Methods to Solve Problems of Natural Convection in a Closed Cavity – V. S. Kuptsova	1199	613
Experimental Investigation of Thermoconvective Waves in Horizontal Gas Layers Yu. I. Barkov, B. M. Berkovskii, and V. E. Fertman	1203	618
Study of the Formation of Thixotropic Structured Systems – É. É. Rafales-Lamarks and B. A. Lishanskii	1207	624
The Correlation Between Temperature Dependence of Electrical Resistance, Resistivity, and Thermal Conductivity of Metals – V. A. Vertogradskii	1212	631
The Study of Ion Transfer in Strontium Fluoride by the Thermo-emf Method – B. M. Mogilevski, V. N. Romanov, and A. F. Chudnovskii	1216	636
Anomalous Behavior of Thermal Conductivity of a Mixture of Strongly Polar and Monatomic Gases in a Constant Electric Field – V. D. Borman, B. I. Nikolaev, and V. I. Troyan	1219	640
On the Temperature Dependence of the Thermal Conductivity of Ceramic Materials with Rarefaction of the Gas Medium – E. Ya. Litovskii, I. D. Zborovskii, and I. N. Uspenskii	1225	648
Concentration Dependence of Thermodiffusion Constant of H_2–He and N_2–N_2O Mixtures – A. G. Shashkov, A. F. Zolotukhina, and T. N. Abramenko	1231	655
Viscosity of Water at Temperatures of –20 to 150°C – A. A. Aleksandrov and M. S. Trakhtengerts	1235	660
Formation of an Ice Layer of Given Thickness by Accumulation of a Liquid on a Cooled Cylindrical Surface – P. P. Yushkov and V. B. Rzhevskaya	1240	667
Fluid Thermal Activity Coefficient Using Water as an Example – A. M. Mamedov	1244	672
Choice of Rheological Models – A. Kh. Mirzadzhanadze, Z. P. Shul'man, and M. G. Kopeikis	1249	679
Reduction of Hydrodynamic Resistance by Surfactants – I. L. Povkh, A. B. Stupin, V. M. Dobrychenko, and S. N. Maksyntenko	1251	682
Acoustic Energy of a Nonisothermal Jet – L. M. Vyaz'menskaya	1255	687

	Engl.	Russ.
Calculation of the Equilibrium Composition of Reacting Gas Systems — V. I. Bronshtein, L. N. Panasenko, T. L. Perel'man, and O. I. Yas'ko	1260	694
Laminar Flow of Thin Liquid Films — V. N. Beshkov and C. Boyadjiev	1266	702
Numerical Method of Determining the Boundary Conditions at the Surfaces of a Continuous Casting from the Profile of the Solidification Front — N. L. Gol'dman, A. B. Uspenskii, E. N. Soboleva, and E. G. Shadek	1270	707
Solution of a Boundary-Value Problem for the Generalized Diffusion Equation — V. N. Chigarev and I. M. Fedotkin	1276	714
Computational–Experimental Determination of the Thermophysical Properties of Materials — V. V. Frolov	1281	720
Growth Kinetics of Low-Temperature Oxide Films on Silicon — L. I. Gurskii, V. M. Koleshko, B. S. Reznikov, I. V. Nekaryukin, and A. A. Kovalevskii	1287	728
Approximation of Inhomogeneous Thermal Lines Via Series Connection of Homogeneous Thermal Lines — L. S. Eleinikova	1290	732
ABSTRACTS OF ARTICLES DEPOSITED AT VINITI		
Convective Heat Exchange Between Coaxial Rotating Cylinders — M. B. Raitsis	1294	738
Heat Exchange and Critical Heat Loads During Boiling in a Horizontal Slot Immersed in a Free Volume of Liquid – A. L. Koba and G. F. Smirnov	1294	738
Thermodynamic Characteristics of a Vortex Tube with Supplementary Flow — A. P. Merkulov and Sh. A. Piralishvili	1295	739
Theory and Calculation of a Filter Bed — V. A. Uspenskii, O. Kh. Vurdenko, A. N. Podolyaka, and V. A. Sharapov	1296	740
Approximate Matrix Calculation of the Temperature Field of a Plane Layered System — Yu. P. Dvin	1298	742
An Apparatus for Pore-Radius Distribution Determination — L. A. Stasevich and E. E. Zuikova	1299	743
Effects of Material Properties on Dislocation Etching — B. D. Platonov, V. A. Mal'tseva, B. A. Krasyuk and Ya. M. Mekher	1299	744
Effects of Some Factors on Substrate Temperature – G. B. Dinzburg	1300	744
Transfer Processes in Multiple Valves — B. N. Birger	1301	745
BOOK REVIEWS		
P. M. Ogibalova and A. Kh. Mirzadzhanzade. Nonsteady Movement of Viscoplastic Media – Reviewed by B. M. Smol'skii, N. N. Veregin, and Z. P. Shul'man	1302	747
Robert W. Fox and Alan McDonald. Introduction to Fluid Mechanics – Reviewed by L. P. Orlov	1304	749

Volume 27, Number 5 November, 1974

Investigation of the Heat Exchange of a Flat Element in a Dynamic Two-Phase Layer – A. N. Khoze, A. P. Burdukov, B. G. Pokusaev and V. A. Kuz'min	1307	773
Heat Transfer in a Pumped Polymethylphenylsiloxane Liquid Near the Critical Pressure – Sh. G. Kaplan, K. P. Grinevich, K.N. Fastova, and R. E. Tolchinskaya	1310	776
Study of Heat and Mass Transfer Processes in Plane Channels of Arbitrary Shape Occupied by a Grid (Mesh) – G. F. Muchnik, I. G. Meerovich, L. I. Zaichik, and I. Yu. Kertselli	1317	785
Numerical Experiment on Mass Transfer in Binary Mixture, Using the Mathematical Model of Convective Diffusion for the Turbulent Flow of Gas in a Tube – E. N. Konstantinov and V. A. Kuznechikov	1321	790
Differential, Difference, and Integral Methods of Measuring Temperature Dependence of Coefficient of Thermal Conductivity – J. Rafalowicz	1326	796

	Engl.	Russ
Thermophysical Characteristics of Fusion Thermal Tracers – L. N. Novichenok, I. L. Svirnovskaya, and S. M. Kazakova	1331	802
Thermophysical Characteristics of the Amorphous Phase of Irradiated Polyethylene – B. A. Briskman and V. P. Savina	1333	804
Thermal Resistance of the Contact of Wavy Surfaces in a Vaccum – V. M. Popov	1339	811
On the Rupture Mechanism of Refractory Materials Caused by Internal Heat Evolution – D. F. Bozhko, V. I. Buglakov, and B. F. Rzyanin	1345	818
Trends in Diffusion-Limited Condensation of Zinc and Lead Vapors – K. M. Aref'ev, A. R. Lesyuis, B. M. Khomchenkov, and L. Sh. Tsemekhman	1351	825
Extrapolation of the Emissivity of Gases – S. P. Detkov and A. N. Beregovoi	1357	833
Self-Excitation of Oscillations in Separated Supersonic Flows – M. G. Morozov	1364	840
Statistical Characteristics of the Ripple Flow of a Liquid Film – V. M. Pakhaluev and A. G. Sheinkman	1368	845
Electrodynamic Flows of Media Obeying a Nonlinear Rheological Law – A. M. Makarov, L. K. Martinson, V. R. Romanovskii, M. R. Romanovskii, and S. L. Simkhovich	1372	850
Spectroscopic Studies of the Structural Variability of Water Containing Linear Antiturbulence Macromolecules – K. F. Lyashev, I. M. Fedotkin, and B. V. Deryagin	1380	860
Free Convection of Nonlinearly Viscous Fluids around Thin Bodies of Revolution under Boundary Conditions of the Second Kind – Z. P. Shul'man, V. I. Baikov, and E. A. Zal'tsgendler	1384	865
Mass Transfer in an Immobile Polydisperse Filter Bed – Yu. A. Berman and R. F. Nagaev	1388	869
A Semiempirical Equation of State for Dense Helium – S. D. Gavrilov	1396	878
Density of Liquid 4-Methylpentane-1 at High Pressures and Various Temperatures – N. A. Agaev, A. D. Yusibova, A. A. Pashaev, Z. Nuretdinov, and I. I. Pis'man	1400	883
Heat Transfer in a Cylindrical Underground Channel – B. L. Krivoshein and V. N. Novakovskii	1403	887
Motion of a Nonisothermal Mixture through a Porous Medium – L. K. Tsabek	1410	895
Relation between Coefficients of Heat Conduction and Dynamic Viscosity of Fluids – A. M. Mamedov	1417	903
ABSTRACTS OF ARTICLES DEPOSITED AT VINITI		
Natural Convective Heat Transfer and Resistance for a Heated Spherical Body with a Laminar Boundary Layer – A. A. Gusakov and G. A. Kolykhalov	1422	908
Velocity and Temperature Distributions of a Turbulent Air Flow in a Horizontal Pipe under the Influence of Thermogravitational Forces – A. F. Polyakov, V. A. Kuleshov, and Yu. L. Shekhter	1422	908
An Approximate Analytic Solution of the Two-Dimensional Radiative Heat Transfer Problem – B. I. Medvedev, Si. I. Gertsyk, and A. G. Zen'kovskii	1423	909
Nonstationary Heat Conduction in a Hemisphere – S. I. Prokopets	1424	910
Effects of Thermocouple Recesses on the Temperature Distribution in a Fuel Rod – Yu. V. Mironov and N. S. Razina	1425	911
The Transient Temperature Pattern around a Noncircular Excavation – I. A. Yabko	1425	911
Thermal Stresses in an Unbounded Plate with Temperature Dependent Thermal Diffusivity – I. Ya. Chernyavskii, V. V. Akesnov, and V. V. Kotel'nikov	1426	912
Sizes of Steam Bubbles Produced by Small Pores – I. I. Markov	1427	913
An Energy Model for the Displacement of Liquid by Vapor in the Circulation Loop of an Evaporator – M. B. Vaisblat, L. A. Minukhin, and A. M. Rozen	1429	915
Electrolyte Scale Deposition Mechanism for Boiling Electrolyte Solutions – V. S. Malovichko, S. M. Konstantinov, and V. D. Popov	1430	916
Solution of Some Steady-State Problems in the Theory of Thermal Conduction – V. T. Ivanov and F. V. Lubyshev	1431	917
Distribution of the Statistical Characteristics of the Temperature over the Thickness of a Heat-Transmitting Wall – V. A. Vorob'ev and O. V. Remizov	1432	918
Thermodynamic Processes of a Real Gas – K. A. Khairutdinov	1433	919

Equation of State for Multicomponent Gas Mixtures – G. Ya. Savel'ev 1434 920
Model of Total Viscosity in the Boundary Region of a Turbulent Boundary Layer – V. D. Sovershennyi 1435 920
Experimental Study of an Underexpanded Jet Escaping from a Nozzle with a Slanted Cut – V. I. Pogorelov and G. B. Shcherbanina 1436 921
Dynamics of a Two-Phase Medium at Low Accelerations – D. P. Alekseev 1437 922
A Horizontal Stabilized Heterogeneous Flow in Pneumatic Transport – M. E. Dozin 1437 923
Droplet Size Spectrum Determination by Pulse Counting – É. G. Bratuta and A. R. Pereselkov 1438 923

CHRONICLES

The International Center of the Academies of Sciences of the Socialist Countries for Training in Heat and Mass Transfer – V. A. Borodulya 1440 925
The Seventh All-Union Rheology Seminar, Gomel, May 27-31, 1974 – Z. P. Shul'man and A. D. Matsepuro 1443 928

Volume 27, Number 6 December, 1974

Boiling of Sodium in a Circular Pipe – N. I. Buleev, L. Ya. Kazakova, V. M. Loshchinin, I. I. Palkin, and P. V. Prostov 1447 957
Growth Rate of Liquid Drops on a Flat Surface during Dropwise Condensation of Vapor from a Vapor–Gas Mixture – P. A. Novikov, L. Ya. Lyubin, V. I. Svershchek, and L. A. Shcherbakov 1453 964
Condensation of a Vapor Mixture in the Absence of Noncondensing Gases – G. P. Golovinskii 1460 973
Vertical Forces Acting on Horizontal Disks in a Fluidized Bed – A. P. Baskakov and B. A. Michkovskii 1464 978
Heat Transfer between a Fluidized Bed and a Plate during Drying – L. K. Vasanova, N. I. Syromyatnikov, and A. I. Evplanov 1467 982
Probability for the Collision with a Solid Surface as a Drop Passes through a Packed Column – A. M. Landau and A. S. Zheleznyak 1470 986
Possibilities for Accurate Control of the Relative Humidity of Air – K. Kostyrko and B. Klenovskaya 1474 991
Influence of Properties of Filtering Liquids on the Permeability of Disperse Systems – P. P. Olodovskii and M. G. Murashko 1482 1002
Capillary Absorption of Heat Pipe Wicks – M. G. Semena, A. G. Kostornov, A. N. Gershuni, A. L. Moroz, and V. K. Zaripov 1487 1009
Mass Exchange between a Solid Spherical Body and a Current-Carrying Liquid – G. A. Aksel'rud and G. M. Oreper 1492 1015
Intramolecular Relaxation of Macromolecules – A. B. Bartman, S. G. Galaktionov, V. N. Papkovich, and T. L. Perel'man 1495 1019
Simple Model for Scanning Calorimeter with Pyroelectric Heat Sensor – I. A. Kleinman, A. Z. Rabinovich, M. B. Roitberg, and M. S. Chupakhin 1502 1028
Constant-Power Resistive-Probe Method and Measurement of Liquid-Semiconductor Thermal Conductivity – B. M. Mogilevskii, V. N. Sokolov, and A. F. Chudnovskii. 1506 1033
Estimate of the Quantum Correction to the Transport Coefficients of Monatomic Gases – V. S. Yargin and G. I. Belashova 1512 1041
Radiation Effect in Measuring the Thermal Conductivity of Saturated Hydrocarbons – T. V. Gurenkova, I. Kh. Mukhametzyanov, G. Kh. Mukhamedzyanov, and A. G. Usmanov 1516 1046
Transport of Radiant Energy in Multilayer Scattering and Absorbing Materials – S. G. Il'yasov and V. V. Krasnikov 1521 1053
Theory of the Heating of Dielectrics by High-Power Electromagnetic Fields – L. É. Rikenglaz 1527 1061
Transport Processes in Bodies with a Large Number of Cracks – R. L. Salganik 1534 1069

Solution of Equation of Admixture Transfer in a Cylindrical Channel with the Dependence of Diffusion Coefficient on Concentration and Gas Exchange with Wall Taken into Account – A. E. Kalyusskii and S. P. Grekov 1539 1076
Cooling Time of Circulating Cryogenic Systems – V. E. Keilin, I. A. Kovalev, and S. A. Lelekhov. 1543 1081
Numerical Calculation of Opposing Jets of a Viscous Incompressible Liquid – P. S. Kuts and V. A. Dolgushev 1550 1090
Convective Stability in a System of Two Infinite Horizontal Layers of Immiscible Liquids – É. I. Berezovskii, T. L. Perel'man, and E. A. Romashko 1556 1098
Mixing Process in a Free Turbulent Flare in a Jet – V. N. Strokin 1564 1109
Effect of Structure Formation in a Constant Electric Field on the Thermal Conductivity of a Suspension of Aerosil in Cetane – Z. P. Shul'man, A. D. Matsepuro, L. N. Novichenok, S. A. Demchuk, and I. L. Svirnovskaya 1569 1116
Heat Conduction for Off-Center Annulus – V. S. Kolesov, I. I. Fedik, and E. E. Chuiko . 1573 1122
Influence of Vortex-Tube Configuration and Length on the Process of Energetic Gas Separation – Yu. D. Raiskii and L. E. Tunkel' 1578 1128

OBITUARIES
Teodor L'vovich Perel'man 1582 1134
Teodor Gregorich. 1583 1135

BOOK REVIEWS
R. B. Keey. Drying: Principles and Practice – Reviewed by I. F. Pikus. 1584 1136

INDEX
Author Index, Volumes 26-27, 1974. . . . . .
Tables of Contents, Volumes 26-27, 1974. . . . . .